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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,940	12/03/2001	Andreas Krause	364/85	7790
7590		01/29/2004	EXAMINER	
KENYON & KENYON			ZIMMERMAN, JOHN J	
One Broadway			ART UNIT	PAPER NUMBER
New York, NY 10004			1775	

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	Applicant(s)
10/004,940	KRAUSE ET AL. <i>CD</i>
Examiner	Art Unit
John J. Zimmerman	1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

### A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 05 December 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-8 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-8 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 03 December 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.  
4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_\_

## SECOND OFFICE ACTION

### *Amendments*

1. This Office Action is in response to the Amendment received December 5, 2003. Claims 1-8 are pending in this prosecution.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's disclosure of the prior art in view of Kandev (U.S. Patent 6,386,270), and further in view of Pamart (U.S. Patent 4,475,721) and Kranz (U.S. Patent 3,773,503).

4. Applicant discloses that casting troughs used in the continuous casting of copper are known to be heated with gas burners in the prior art, but that heating in this manner generates considerable noise, excess heat and is difficult to control (e.g. see Background of the Invention; pages 1-5). This applicant's admitted disclosure of the prior art differs from the claims mainly in

that induction heating of the trough is used to overcome the problems of noise, excess heat and difficulty of control presented by gas burners. Kandev is cited to show that Kandev also noted that high intensity burners are noisy, inefficient and are difficult to control when used in continuous copper casting operations (e.g. dam blocks; see column 2, lines 16-45). Kandev solved this problem by applying inductively heatable liner material to the continuous casting machine dam blocks (e.g. see column 3, lines 15-18) and discloses that this enables him to precisely control the temperature (e.g. column 3, lines 36-38). Kandev differs from the claims in that he applies the liner material to the dam blocks of a continuous caster, but since the same problems are admitted by applicant to also exist for the casting troughs of continuous casting machines, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the very same heating solution would apply to the troughs as to the dam blocks in a continuous copper casting operation.

5. Kandev may differ from the claims in that Kandev may not disclose the use of graphite as the material for induction heating the casting apparatus. Pamart, however, discloses that induction coils can be used in conjunction with graphite sleeves to preheat casting channels (e.g. see column 2, lines 13-24). And Kranz discloses that induction heated graphite crucibles are used in the continuous casting of copper (e.g. see column 4, lines 18-31). Therefore it is clearly understood by those skilled in the art that graphite also serves as an art recognized alternative material in induction heated casting processes. In view of Pamart and Kranz, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use graphite or any other suitable art recognized alternative materials in the casting troughs of applicant's

admitted prior art, since Kandev shows that induction heating is clearly better than using burners and Pamart and Kranz show other art recognized alternative materials that can be used in induction heating apparatuses.

6. Regarding the use of applicant's admitted disclosure of the prior art in this rejection, it is axiomatic that consideration of the prior art cited by the examiner must, of necessity, include consideration of the admitted state of the art found in applicant's specification, *In re Davis*, 305 F.2d 501, 134 USPQ 256 (CCPA 1962); *In re Hedges*, 783 F.2d 1038, 228 USPQ 685 (Fed. Cir. 1986). Admitted knowledge in the prior art may be used in determining patentability of the claimed subject matter, *In re Nomiya*, 509 F.2d 566, 184 USPQ 607 (CCPA 1975).

***Response to Arguments***

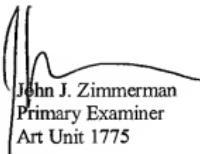
7. Applicant's arguments filed December 5, 2003 have been fully considered but they are not persuasive.

8. Regarding the rejection of claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over applicant's disclosure of the prior art in view of Kandev (U.S. Patent 6,386,270), and further in view of Pamart (U.S. Patent 4,475,721) and Kranz (U.S. Patent 3,773,503), applicant argues that Kandev does not qualify as prior art since applicant's priority document predates Kandev. The examiner notes, however, that applicant cannot rely upon foreign priority papers to overcome this rejection unless a certified translation of said papers has been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571)-272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Deborah Jones can be reached on (571)272-1535. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



John J. Zimmerman  
Primary Examiner  
Art Unit 1775

jjz  
January 23, 2004